

What is claimed is:

1. A perforating tool for perforating single or multiple layer material webs or sheets separated therefrom, the perforating tool comprising:

a first section having a plurality of perforating teeth and a perforation-free gap;
and

a second section having a cutting zone and at least one group of perforating elements in alternating sequential fashion, the perforating elements being angled with respect to a longitudinal axis of the second section.

2. The perforating tool as recited in claim 1 wherein the perforation-free gap of the first section borders on the cutting zone of the second section.

3. The perforating tool as recited in claim 1 wherein the cutting zone borders, on one side, on the perforation-free gap and, on the other side, on the group of perforating elements.

4. The perforating tool as recited in claim 1 wherein the perforating elements of the group are angled in relation to the axis at an angle of between 20° and 40°.

5. The perforating tool as recited in claim 4 wherein the angle is 30°.

6. The perforating tool as recited in claim 1 wherein the at least one group includes two groups and the second section further includes cutting segments, in alternating sequential fashion, between the groups.

7. The perforating tool as recited in claim 1 wherein the perforating elements at a front edge and at ^athe rear edge are symmetrically angled with respect to the axis.

NO. 1, B.

8. The perforating tool as recited in claim 1 wherein the perforating elements at a rear edge are angled on one side with respect to the axis.

9. The perforating tool as recited in claim 1 wherein the perforating elements at a front edge are inclined with respect to the axis.

No. A.B.

10. The perforating tool as recited in claim 1 wherein the slanted perforating elements are configured as perforating tongues.

No. A.B.

11. The perforating tool as recited in claim 10 wherein the individual perforating elements of the group of perforating elements are separated by slit-shaped openings.

12. The perforating tool as recited in claim 1 wherein the perforating elements of the group have a slanted surface at tips of the perforating elements.

No. A.B.

13. The perforating tool as recited in claim 1 wherein a length of the first section and a length of the second section are the same.

Transverse & generally
14. A perforating device in a folding apparatus arranged downstream of a web-processing rotary printing machine, having a perforating tool as recited in claim 1.

15. A perforating tool for perforating single or multiple layer material webs or sheets separated therefrom, the perforating tool comprising:

a first section having a plurality of perforating teeth and a perforation-free gap;

and

a second section having a cutting zone and a plurality of perforating elements angled with respect to the perforating tool and arranged in the second section in sequential rows.